APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,147	01/04/2002	David W. Brown	P214021	9308

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EXAMINER
SCUDERI, PHILIP S

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	10/039,147	BROWN, DAVID W.
Office Action Summary	Examiner	Art Unit	
	Philip S. Scuderi	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 December 2005</u>.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-24</u> is/are rejected.
7)☒ Claim(s) <u>1</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to applicant's submission filed on 27 December 2005.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 December 2005 has been entered.

Claim Objections

Claim 1 is objected to for minor informalities. The claim recites "a format ... is determined based on at least one motion control system selected" in lines 17-19 which should presumably read "a format ... is determined based on <u>which</u> at least one motion control system <u>is</u> selected". The examiner suggests making the aforementioned change and amending lines 2-3 of the preamble of the claim to read "... at least one <u>selected motion control system</u> of a plurality of supported motion control systems..." in order to make the claim consistent. Appropriate correction or clarification is required.

Claim 12 is objected to for a minor informality. The claim recites "storing services requests" which should presumably read "storing service requests". Appropriate correction or clarification is required.

Response to Arguments

Applicant's arguments, see the remarks, filed 27 December 2005, with respect to the

rejection(s) of claim(s) 1-12 under 35 U.S.C. 102(b) have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new

ground(s) of rejection is made below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in
the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent
by another filed in the United States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an
application filed in the United States only if the international application designated the United States and was
published under Article 21(2) of such treaty in the English language.

Claims 1-9 and 13-21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

No. 6,473,824 (hereinafter "Kreissig").

Regarding claim 1, Kreissig teaches a system for transferring a hardware independent service

request between a client and at least one selected motion control system of a plurality of supported

motion control systems using a communications network (figures 49 and 85, column 53 line 42 –

column 54 line 17, column 55 lines 13-35), comprising:

a client build module (see figures 85 and 86, browser 872 or TCP client 880B) for building a

service request envelope (for sending commands, e.g. column 56 lines 45-64) for containing the

hardware independent service request (column 53 lines 42-62), where

the hardware independent service request is associated with a service performed by

the motion control system (e.g. a motion command, column 53 line 63 – column 54 line 17), and

the client build module transmits the service request envelope across the

communications network (e.g. across an IP network, see figure 85);

a service request format module for extracting the hardware independent service request

from the service request envelope (figure 85, 600), converting the hardware independent service

request into a hardware independent service request method, and invoking the hardware

independent service request method (column 53 lines 42-62); wherein

the motion control system comprises a motion control services module that converts the

hardware independent service request method into at least one hardware dependent motion

command (column 53 lines 42-62), where a format of the at least one hardware dependent motion

command is determined based on which at least one motion control system is selected from the

plurality of supported motion control systems (e.g., based on which servomotor is being controlled);

and

the motion control system operates in response to the hardware dependent motion

command to perform the service associated with the service request (column 53 line 63 – column 54

line 17).

Regarding claim 13, Kreissig teaches the system discussed in regards to claim 1, wherein the

hardware independent service request method conforms to a programming interface common to the

supported motion control systems (functions to initialize hardware, make basic moves, etc., column 53 lines 42-62).

Regarding claims 2 and 14, Kreissig teaches receiving a return value from the motion control system in response to the service request, building a response envelope containing the return value, and transmitting the response envelope to the client application (e.g., responding with motion control status, column 54 lines 6-7).

Regarding claims 3 and 15, Kreissig teaches invoking the service request method on the motion control system across a communications network (e.g. across Ethernet 612, see figure 49).

Regarding claims 4 and 16, Kreissig teaches invoking the service request method on the motion control system across a process boundary (on a separate controller, see figure 49).

Regarding claims 5 and 17, Kreissig teaches invoking the service request method on the motion control system within a single process (i.e., a single sequence of steps).

Regarding claims 6 and 18, Kreissig teaches converting the service request into a service request method (e.g., into a hardware independent motion routine, column 53 lines 42-62).

Regarding claims 7 and 19, Kreissig teaches a data format module that converts service request data between a first data format associated with the communications network (e.g., HTTP)

and a second data format associated with the motion control system (e.g., independent motion

commands, e.g. see column 53 lines 42-62).

Regarding claims 8 and 20, Kreissig does not expressly disclose a method discovery module

for determining a set of services supported by the motion control system. However, such a module

is inherent because the clients (872-876) must have some means for determining which commands

are supported in order to send commands (column 56 lines 45-64).

Regarding claims 9 and 21, Kreissig teaches a data management module that manages service

requests (e.g., that provides mutual exclusion for public methods, column 53 lines 42-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

Claims 10-12 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kreissig.

Regarding claims 10-12 and 22-24, Kreissig does not teach routing service requests to a

database for persistent storage or processing data stored in the database. Kreissig teaches that the

servo model provides mutual exclusion when necessary for public methods. Kreissig does not expressly disclose what happens to service requests that are blocked when other logic has a higher execution priority. The examiner takes official notice that it was well known in the art to cache lower priority commands in memory (i.e., a in database) until logic with a higher execution priority unblocks a blocked section of code (e.g., using mutex objects). Thus, it would have been obvious to cache lower priority commands in memory (i.e., a in database) until logic with a higher execution priority unblocks a blocked section of code, thereby making sure the blocked calls do in fact execute and the system provides the requested services.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip S. Scuderi whose telephone number is (571) 272-5865. The examiner can normally be reached on Monday-Friday 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PSS

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